

TYPIFICATION OF MEXICAN ASTEREAEE (ASTERACEAE), BASED ON SPECIMENS IN THE HARVARD UNIVERSITY HERBARIA

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ABSTRACT

Lectotypifications and clarifications of typification are presented for various Mexican taxa of *Erigeron*, *Laennecia*, and *Baccharis*. The names for these were originally proposed in *Achaetogeron*, *Aster*, *Conyza*, and *Erigeron*.

KEY WORDS: *Erigeron*, *Laennecia*, *Baccharis*, Astereae, Asteraceae, typification

Recent studies and annotations by the second author of collections in the Harvard University Herbaria have brought attention to unresolved problems in typification of Asteraceae and pointed out the need for lectotypification in a number of instances. Some taxonomic problems were clarified by consulting sheets bearing a tracing (made in Berlin in August 1901 by J.M. Greenman [JMG]) of a type specimen from B, and mounted for GH with fragments of the specimen. In each of the following citations the currently accepted name is in boldface.

1. *Conyza coulteri* A. Gray, Proc. Amer. Acad. Arts 7:355. 1868. SYNTYPES: UNITED STATES. California: *T. Coulter 285 & 286* (GH). ***Laennecia coulteri*** (A. Gray) Nesom, *Phytologia* 68:217. 1990.

In the original publication of *Conyza coulteri* A. Gray, Gray cited only two collections, Coulter's 285 and 286. The material in the Gray Herbarium consists of only a few, small fragments in a single packet annotated by Gray as "Hb. Harvey." Both of Coulter's collection numbers are written on the packet,

which itself is mounted on a sheet with four other separate collections of the same species. William H. Harvey was the Keeper of the University Herbarium at Trinity College (TCD), and in fact followed Thomas Coulter in that post. Coulter left the Trinity College herbarium a large collection of specimens from California and México (Ducker 1988). The original collections of Coulter's 285 and 286, one of which should be chosen as the lectotype, should be sought there.

2. *Erigeron eriophyllus* A. Gray, Smithsonian Contrib. Knowl. 5 [Pl. Wright. 2]:77. 1853. LECTOTYPE (designated here): MÉXICO. Sonora: on the Sonoita, near Deserted Rancho, Sept [1851], C. Wright s.n. (GH). *Conyza eriophylla* (A. Gray) Cronq., Bull. Torrey Bot. Club 70:632. 1943. *Laennecia eriophylla* (A. Gray) Nesom, Phytologia 68:218. 1990.

Collection data on the label of this specimen give only "Sonora," but it is annotated in Gray's hand as "*E. (Coenotus) eriophyllum* n. sp." No other specimens have been located at GH that might be construed as type material. Nesom (1990) cited this sheet as the holotype and incorrectly noted that it was collected in Arizona.

3. *Erigeron calcicola* Greenman, Proc. Amer. Acad. Arts 41:256. 1905. LECTOTYPE (designated here): MÉXICO. Hidalgo: chalk bluffs of Dublan, 6800 ft, 16 Sep 1902, C.G. Pringle 9899 (GH!).

Greenman cited this collection among other syntypes: Palmer 20, Parry & Palmer 391, and Pringle 8223.

4. *Aster lepidopodus* B.L. Robins. & Fern., Proc. Amer. Acad. Arts 30:117. 1894. TYPE: MÉXICO. Chihuahua: in pine forest about Chachuichupa, 14 Jun 1891, C.V. Hartman 697 (HOLOTYPE: GH!; Isotypes: US-2 sheets!). *Erigeron lepidopodus* (B.L. Robins. & Fern.) Nesom, Sida 9:31. 1981.

The GH sheet is believed to have been annotated by Mary A. Day, who worked at the Gray Herbarium with Robinson & Fernald, as "*Aster lepidopodus* Rob. & Fern. n. sp." Although Robinson & Fernald did not specifically note their specimen was housed at GH, no other specimen was cited. Nesom (1981) incorrectly cited one of the US sheets as the holotype.

5. *Erigeron foliosus* Nutt. var. *tenuissimus* A. Gray, Syn. Fl. N. Amer. 1(2):215. 1844. LECTOTYPE (designated here): MÉXICO. Baja California Norte: Hansen's ranch, 30 Jul 1883, C.R. Orcutt 1000 (GH!). *Erigeron foliosus* Nutt. var. *stenophyllus* (Nutt.) A. Gray; not *E. tenuissimus* E. Greene.

This specimen is selected from among several syntypes. In the original publication, Gray cited "San Diego Co. on the Mexican border, and within Lower California, Parry, Palmer, Orcutt."

6. *Conyza panamensis* Willd., *Sp. Pl.* 3:1942. 1803. TYPE: "PANAMÁ," *Humboldt s.n.* (Probable HOLOTYPE: B, tracing by JMG and fragment GH!). *Baccharis* sp.

According to the annotation by Greenman, the tracing is "of the original." De Candolle (*Prodr.* 5:390. 1836.) noted that this species, from the description, probably was *Baccharis*, and Schultz-Bipontinus later ("8/6/52") annotated the B specimen as "*Baccharis panamensis*" (an unpublished name). Hemsley (1881) listed it as a species of *Conyza* from Panamá without comment, but the name was not included in the recent *Compositae of Panamá* (D'Arcy 1975) and we have not been able to find any published elucidation of its identity.

The identification of this specimen as *Baccharis* or *Archibaccharis* is unequivocal, but the determination of the species is more problematic. The fragment consists of one staminate head and the distal two-thirds of a leaf. The morphology of the plant is summarized in the following paragraph.

Stems straight or arching, not fractiflex. Leaves sessile or nearly so, narrowly ovate-lanceolate, prominently 3 nerved, 6 cm long, 16-19 mm wide at the widest point, with entire (not even mucronulate), slightly revolute, sparsely ciliate margins, very sparsely puberulous beneath with minute, reddish, viscidulous hairs, glabrate and shiny above. Heads staminate (flowers with abortive ovaries); corollas tubular, with lobes cut halfway to the base of the limb.

Although the label indicates that the plant was collected in Panamá, it is not one of the known species of *Baccharis* or *Archibaccharis* from México or Central America. Since *Archibaccharis* has not been found in South America, the specimen probably represents a species of *Baccharis* from South America, although we have not been able to match it with any species. Further, the alleged collector, Humboldt, did not leave South America for México until February 1803, and he apparently made no stops in Central America.

7. *Aster asperrimus* Less., *Linnaea* 5:142. 1830. TYPE: MÉXICO. [Veracruz]: in dumetis apicis prope La Hacienda de la Laguna, Sep [1828], *C.J.W. Schiede 305* (Probable HOLOTYPE: B, tracing by JMG and fragment GH!). *Solidago altissima* L.
8. *Aster scaberrimus* Less., *Linnaea* 5:143. 1830. TYPE: MÉXICO. Veracruz: in sylvaticis prope Jalapam, [28] Aug [1828], *C.J.W. Schiede 308* (HOLOTYPE: B, tracing by JMG and fragment GH!; Isotype: HAL!). *Erigeron scaberrimus* (Less.) Nesom, *Sida* 11:250. 1985; not Gardner, 1848. *Erigeron veracruzensis* Nesom, *Phytologia* 67:74. 1989 (*nom. nov.*, based on *Schiede 308*).

Erigeron longipes DC. (including *E. affine* DC. and *E. scaposus* DC.) was cited by Nesom & Sundberg (1985) as a synonym of *E. veracruzensis*, but the latter, which has noncoiling rays and a branched capitulescence, is a different species.

9. *Erigeron socorrensis* Brandegee, *Erythea* 7:4. 1899. LECTOTYPE (designated here): MÉXICO. [Colima]: Socorro Island, Mar-Jun 1897, A.W. Anthony 376 (UC!; Isolectotypes: DS-2 sheets!, GH! UC!, US-3 sheets!).

Brandegee cited only the single collection but did not specify the herbarium where it was deposited.

In the following instances (10-15), lectotypes are designated where J.M. Greenman cited two specimens of a single collection from different herbaria without specifying a holotype. Greenman was working at the time from GH, and we have selected these sheets as the lectotypes.

10. *Erigeron oaxacanus* Greenman, *Proc. Amer. Acad. Arts* 41:257. 1905. LECTOTYPE (designated here): MÉXICO. Oaxaca: near San Mateo del Mar, 16 May 1895, E.W. Nelson 2606 (GH!; Isolectotype: US!).
11. *Erigeron irazuensis* Greenman, *Proc. Amer. Acad. Arts* 40:36. 1904. LECTOTYPE (designated here): COSTA RICA. La Playita, Volcán Irazu, endroits humides, 3300 m, 31 Jan 1900, H. Pittier 14075 (GH!; Isolectotype: CR ["hb. Physico-Geogr. Cost. Ri." as cited by Greenman]).
12. *Achaetogeron griseus* Greenman, *Proc. Amer. Acad. Arts* 41:254. 1905. LECTOTYPE (designated here): MÉXICO. Durango: vicinity of the city of Durango, Apr-Nov 1896, E. Palmer 821 (GH; Isolectotypes: UC!, US!). *Erigeron griseus* (Greenman) Nesom, *Sida* 9:224. 1982.
13. *Achaetogeron purpurascens* Greenman, *Proc. Amer. Acad. Arts* 39:94. 1903. LECTOTYPE (designated here): MÉXICO. Chihuahua: near Colonia Garcia, 8000 ft, 27 Jul 1899, C.H.T. Townsend & C.M. Barber 175 (GH!; Isolectotypes: MICH!, NY!, PH!, UC!, UNM-2 sheets!, US-2 sheets!). *Erigeron wislizeni* (A. Gray) E. Greene subsp. *purpurascens* (Greenman) Nesom, *Sida* 9:225. 1982. *Erigeron wislizeni* (A. Gray) E. Greene.

These purple rayed plants are now regarded as only a color form of the species, without formal taxonomic recognition (Turner & Nesom, in prep.).

14. *Erigeron oreophilus* Greenman forma *tenuilobus* Greenman, Proc. Amer. Acad. Arts 41:258. 1905. LECTOTYPE (designated here): MÉXICO. Sinaloa: Sierra de Choix, 15 Oct 1898, *E.A. Goldman 255* (GH!; Isolectotype: US!). *Erigeron oreophilus* Greenman.

No infraspecific taxa are recognized within *Erigeron oreophilus* (Nesom 1989).

15. *Erigeron oreophilus* Greenman forma *latilobus* Greenman, Proc. Amer. Acad. Arts 41:258. 1905. LECTOTYPE (designated here): MÉXICO. Chihuahua: base of Mt. Mohinora, 12.8 km from Guadalupe y Calvo, 7000-7500 ft, 23-31 Aug 1898, *E.W. Nelson 4861* (GH!; Isolectotype: US!). *Erigeron oreophilus* Greenman.

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